

## CLTS KNOWLEDGE HUB LEARNING PAPER

# Sanitation in Bangladesh: Revolution, Evolution, and New Challenges

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**CLTS  
Knowledge  
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Strengthening and broadening  
Community-led Total  
Sanitation at scale

# Sanitation in Bangladesh: Revolution, Evolution, and New Challenges

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## Introduction

Bangladesh is a hub of sanitation experimentation and model-building. It is internationally recognised as the place where Community-Led Total Sanitation (CLTS) first succeeded in eliminating open defecation (OD) from whole villages. This and other achievements rest on a broad foundation. After briefly reviewing the history of sanitation promotion in rural Bangladesh, this paper summarises the most urgent issues and challenges related to sustaining the country's achievements in 2015. It concludes with some learning points of possible interest to other countries seeking to promote universal sanitation coverage.

Intensive sanitation promotion in Bangladesh has a long and complicated history dating back to the 1960s. There have been at least two major sanitation campaigns. A UNICEF-led 'Social Mobilisation for Sanitation' campaign in the 1980s was most active in Banaripara Subdistrict in the southern district of Barisal. There was much burning-down of leafy enclosures surrounding outdoor defecation places and forcible removal of 'hanging latrines' extending out over water bodies or fields. Numerous approaches have been tested and replicated. CARE's SAFE/SAFER program, for example, continued for ten years in the southeast from 1991 to 2001, producing numerous public education materials for different social groups and testing a no-subsidy approach. The most extensive campaigns and programmes have focused on changing household-level practices in rural areas.<sup>2</sup> A national-scale, government-led Sanitation Campaign went on from 2003 to 2006.

The 2003-2006 Sanitation Campaign was a remarkable event, one which set in motion a series of activities, some of which continue to this day. Led by a dedicated and detail-oriented government Minister,<sup>3</sup> the campaign deployed a combination of top-down and bottom-up strategies. Although the Minister was a member of the BNP political party, his approach reportedly was non-partisan to an unusual degree. The campaign gave the lowest level of government, the union *parishad* (council),<sup>4</sup> responsibility for achieving '100%' household latrine coverage. Results were carefully monitored by subdistrict and district level officers. A total of 481 unions (11 per cent of all unions) achieved the '100%' goal, some with the help of NGOs and some on their own. Perhaps more importantly, the general mind-set of the population changed to the point where most of the people in most parts of the country now think that open defecation is not a socially acceptable practice.

Following up in '100%' unions four to five years after the campaign ended, we heard many comments about the 'revolutionary' nature of changes in defecation practice. Several people we

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<sup>2</sup> The population of Bangladesh is estimated to be approximately 70 per cent rural.

<sup>3</sup> Abdul Mannan Bhuiyan (1943-2010), Minister of Local Government, Rural Development, and Cooperatives.

<sup>4</sup> A union parishad/council (UP) represents a population of 20,000-50,000. Each union is divided into nine wards, each of which has an elected representative. Three women additionally are elected to the council; each woman represents three of the nine wards. There is a separately elected UP chairman representing the whole union. A union has numerous distinct, named villages and neighbourhoods. In 2001 there were 4484 unions in Bangladesh.

met compared the spirit of the Sanitation Campaign to the nation's independence struggle.

In 2009-2010 I led a study on behalf of the World Bank of 53 unions that had been declared '100%' or ODF (free of open defecation) between 2003 and 2005. Four different approaches were used in these unions: (1) Community-Led Total Sanitation (CLTS); (2) Local government leadership only; (3) Programmes implemented by a single NGO using a non-CLTS approach; and (4) An NGO contracting with a large donor, such as Danida or UNICEF. A survey covered 3000 households of 50 unions. In-depth study was done in 13, five of which had been declared ODF after a CLTS process.<sup>5</sup> Study unions were located in six different types of geographical area. The study had generally positive findings. More than four and one-half years after the Sanitation Campaign, 89.5 per cent of survey households were found to own or share a latrine that safely confined faeces. The remaining households either had reverted to open defecation (2.5 per cent) or were using latrines that did not confine faeces (eight per cent). (Hanchett *et al.* 2011)<sup>6</sup> Our findings agreed with national surveys showing that rural household sanitation improvements in Bangladesh largely have been sustainable.

In 2015 my team did follow-up telephone interviews with nine local leaders and field visits to two study unions, to see how the '100%'/ODF unions were doing ten or more years after the Campaign ended. We had done in-depth studies of these 11 unions in 2009-2010; five were the CLTS unions formerly studied in depth. We also interviewed a number of professionals in Dhaka about their views of sanitation progress and challenges.<sup>7</sup>

## **Institutions and Networks Sustaining Achievements**

Bangladesh's achievements in increasing household latrine use have resulted from a combination of forces: high level policy commitment during the 2003-2006 campaign, consistent support from donors, technical guidance from academic engineers, several large-scale sanitation promotion programmes operating throughout the country for a decade or more, the enthusiasm and pride of union *parishad* chairmen, and ordinary people's determination to maintain village environments and enhance family status by setting up household latrines. It is generally agreed that women are especially interested in household sanitation improvements. 'Once you convince community people, lots of things change', says Milan Kanti Barua, of the BRAC-WASH

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<sup>5</sup> In-depth study involved a small team of three researchers doing focus group discussions, key informant interviews, and structured observations in multiple union locations for a period of approximately one week. Three villages were sampled randomly from each union for survey and in-depth study: one near the union council headquarters, one moderately distant, and one remote. Ten of the 50 unions covered by this study had become ODF after a CLTS process.

<sup>6</sup> This study was conducted under contract with The Manoff Group.

<sup>7</sup> In February 2015 we met with 23 staff members of 14 organisations, who kindly took time to share their experience and views with us: BRAC-WASH (Milan Kanti Barua), BRAC-TUP (Rozina Hoque, Md. Abdullahil Baquee, Sagarika Indu, and Arunava Saha), the HYSAWA Fund (Md. Nurul Osman), ITN-BUET (Professor Dr. Mujibur Rahman), Plan International Bangladesh (Md. Zillur Rahman), Policy Support Unit/PSU (Md. Mohsin and Md. Abdur Rauf), Practical Action (Engr. Dipok Chandra Roy), Sanitation Secretariat (Engr. Md. Wali Ullah), UNICEF (Md. Monirul Alam and Syed Adnan Ibna Hakim), UST (Md. Sayedur Rahman, Shah Md. Anowar Kamal, and Dr. Hamidul Haque), VERC (Md. Masud Hassan), WASHplus/FHI360 (Kathrin Tegenfeldt and Md. Faruque Hussain), WaterAid Bangladesh (Hasin Jahan and Mujtaba Mahbub Morshed), World Bank Water and Sanitation Program (Rokeya Ahmed).

programme. ‘Women are more willing than men to talk in committees and so on. Those working outside the home – especially teachers and social workers -- are most valuable. Women are much more interested in toilets than men are. Without bypassing men, it’s impossible to install a toilet’.

In Dhaka, the nation’s capital, there presently are a number of committees, forums, periodic dissemination workshops, and other occasions fostering communication among a close community of very experienced people. These people have built a certain degree of consensus on what works, what does not, and why. Community mobilisation of some sort is a universal feature of NGO sanitation programmes, for example. There are debates and differences among them, of course, but the Dhaka network is a strong one. All organisations’ sanitation approaches are constantly evolving, and there is much collaboration among them.

A set of policy documents offer frameworks, maps, and other information to guide sanitation related activities of government administrators, and union councils, and organisations implementing special projects. A Danida-funded Policy Support Unit (PDU) distributes these documents. Prominent among them are the government’s *National Sanitation Strategy*, its *Pro Poor Strategy for Water and Sanitation Sector in Bangladesh*, and the *National Policy for Water and Sanitation Hard to Reach Areas Bangladesh 2012* (GoB 2005a, GoB 2005b, GoB 2012).

Governmental involvement appears to have declined since the exuberant days of the Sanitation Campaign. A Sanitation Secretariat set up inside the Department of Public Health Engineering is not doing the expected job of monitoring sanitation progress. This once-promising unit does not have any dedicated staff whatsoever at present. All staff, including the Director, have competing responsibilities in other units. Currently active, Dhaka-level groups include a Horizontal Learning Program organised by the World Bank and a National Forum for Water Supply and Sanitation.<sup>8</sup> A once-lively, government led National Sanitation Forum meets infrequently.

According to Policy Support Unit staff members, the government is planning to set up a separate commission for water and sanitation with support from the Asian Development Bank. In early 2015 a draft bill was under preparation to create this commission. It would be an independent regulatory body emphasising water tariffs in urban areas. Its possible sanitation functions were not explained.

The Government of Bangladesh has participated in a seven-country biennial SACOSAN conference since it hosted the first one in 2003. Presentations and commitments made at SACOSAN conferences help to motivate government officers to address sanitation needs, presumably as a matter of national prestige. The government recently agreed to host the sixth SACOSAN conference in early 2016. The Director of the Sanitation Secretariat is responsible for coordinating conference planning. The government’s decision to host this conference has created

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<sup>8</sup> This group is divided into two sections, 1) Policy, Planning, and Monitoring and 2) Technical Thematic. The Technical Thematic group has 12 sections, one of which is Environmental Sanitation. This group operates under the leadership of the Ministry of Local Government, Rural Development, and Cooperatives. The Secretary ‘always comes to the meetings,’ according to Mr. Wali Ullah. The Forum meets twice a year. (Information from Wali Ullah, Sanitation Secretariat).

a hopeful feeling among Dhaka professionals about its commitment to give sanitation improvement renewed priority in the future. ‘The decision to host SACOSAN 2016 demonstrates the Government’s commitment and interest, and also political will to continue working on sanitation’, according to Engr. Wali Ullah, Director of the Sanitation Secretariat.

The Bangladesh sanitation sector benefits from some national routines established during the 2003-2006 campaign. October is now celebrated as National Sanitation Month throughout the country. According to most reports, there is close cooperation between governmental and non-governmental organisations during National Sanitation Month, when the country’s larger NGOs organise events such as rallies and meetings. As Engr. Wali Ullah says, ‘National Sanitation Month is an important part of our “software”’.

Other widespread changes have occurred. The school curriculum raises children’s awareness of the importance of latrines. There are by now thousands of trained volunteers working to discourage open defecation in their villages. Neighbours complain about bad smells from others’ latrines even in some remote areas. The movement has developed its own momentum.

Free latrine sets are being distributed by some, but not all union council chairmen. During the national Sanitation Campaign and afterwards the government required that union councils use 20 per cent of their funding through the Annual Development Programme (ADP) for sanitation improvements. This requirement was eased by 2008,<sup>9</sup> but many unions nonetheless continue using ADP and other funds to subsidise latrine distribution to poor households. It is common for union chairmen to give to poor households sets of three concrete rings and one slab for installation of simple pit latrines. There is no precise information on how many of these sets have been distributed. Although there are (or were) some required steps to identify actually poor households, the chairmen may or may not follow formal procedures. As elected officials, they are under pressure to meet demands of their constituents to the extent that resources allow.

## Scaling-up

The larger organisations operate at different scales. Some have both district offices and Dhaka headquarters.<sup>10</sup> Several are experimenting with approaches to scaling-up.<sup>11</sup> Although all NGOs use some kind of community mobilisation or group formation, there are differences among them in the ways that they delimit groups. Within the CBO (community based organisation) framework, there are some that recruit participants from broad areas, and some that recruit from precisely defined units, such as neighborhoods, villages, or wards.

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<sup>9</sup> See GoB 2008.

<sup>10</sup> There are 64 districts (*zila*) in Bangladesh. They are subdivided into subdistricts (*upazila*), the total number of which is 488 in 2015. Each district is administered by a District Commissioner. Subdistrict administrators are called Upazila Nirbahi Officers (UNO). Subdistricts also have elected councils (*upazila parishads*) and chairmen.

<sup>11</sup> The natural, most socially interconnected rural unit is the village *para*. Larger, more diverse settlements are the villages and wards of a union. The union, with a population of 20,000 or more, is already a fairly large-scale entity. There are approximately eight to ten unions in a subdistrict.

UNICEF created a program called SLTS, or School Led Total Sanitation, in seven districts.<sup>12</sup> This effort used the school as a centre of information dissemination, promoting total sanitation in clusters of one or two village neighborhoods. Most CLTS programs work in smaller units, such as neighbourhoods or villages; but the premier CLTS innovator, VERC,<sup>13</sup> ‘declared’ a whole subdistrict to be free of open defecation (ODF) in 2004 or 2005. Moving beyond the most localised settlements, a Bangladesh NGO, UST,<sup>14</sup> forms Ward Development Management Committees to do ward-based planning and management. WaterAid Bangladesh is using the same approach in climate-vulnerable areas in the coastal belt. Plan International has a programme to build capacity at the union level. From 2003 to the present, Plan has implemented two programmes placing WASH Facilitators inside union offices to look after water and sanitation issues.<sup>15</sup> The most recent program operates in 81 unions of eight different subdistricts. Plan also manages subdistrict-scale (*upazila*) sanitation programmes in some districts.

The principal NGO-based sanitation programs cover large territories. As Md. Monirul Alam, of UNICEF, points out, ‘NGOs in Bangladesh are very big’. The HYSAWA Fund supports union-level capacity building in 450 unions of 28 districts. This program strives to cover a maximum number of unions in a subdistrict, as unions support and guide the neighborhood-level work of locally hired NGO teams and numerous volunteers. BRAC’s WASH programme is working in 250 whole subdistricts, doing group formation at local levels and trying to reach all or most unions in any subdistrict where they operate. A WaterAid representative, Ms. Hasin Jahan, told us that, ‘We try to cover an entire *upazila* if possible and try to avoid overlap with other programmes. If others are working there, we try to work in collaboration with them at the local level, so that ultimately all unions come under sanitation coverage’. Between 2003 and 2009 WaterAid and its partner organisations implemented sanitation programmes in 300 unions with funding from the UK Department for International Development (DFID). The district offices of some large NGOs may provide technical support to regional programmes of other organisations.

## Data on Household Latrine Coverage

The Government of Bangladesh did a baseline survey in October 2003, before the Sanitation Campaign started. This study found 33 per cent of all households using ‘hygienic latrines’, 25 per cent using ‘unhygienic’ types, and 42 per cent resorting to open defecation (Government of Bangladesh 2005a).

Different definitions are used by different organisations that systematically monitor household latrine coverage in Bangladesh. These definitions influence the way that sanitation achievements are measured. The different results can be either confusing or likely to provoke disagreements

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<sup>12</sup> This programme’s work was completed in December 2014.

<sup>13</sup> VERC is a partner organisation working with WaterAid Bangladesh.

<sup>14</sup> UST is a partner organisation working with WaterAid Bangladesh.

<sup>15</sup> The first phase of this programme, called Dishari, was implemented in five *upazilas* by Plan together with Dhaka Ahsania Mission, WaterAid, the World Bank’s Water and Sanitation Program between 2004 and 2009.

about whether goals have been met or not. The WHO-UNICEF Joint Monitoring Program (JMP) defines an ‘improved latrine’ as one which confines faeces in a pit or septic tank. The pit must have some kind of slab or other cover, but it need not have a water-seal or other tight cover on the pit. The JMP excludes latrines shared by more than one household from its ‘improved’ category. This is a controversial point in Bangladesh, where many households share water and sanitation facilities with close relatives living in common compounds called *baris*. The Government of Bangladesh’s ‘hygienic latrine’ definition, in contrast, includes latrines used either by one household or two (up to 10 people), and which confine faeces in pits or septic tanks, but only if their covers/slabs are closed by intact water-seals or flaps (GoB 2005).

Annex 1 summarises some recent information on household latrine coverage from various large-scale surveys. These survey data are not strictly comparable, but they do give a general picture of current household latrine coverage. As Annex 1 shows, JMP’s national survey data indicate that approximately 85 per cent of Bangladesh households<sup>16</sup> are using latrines that would meet the JMP ‘improved’ standard, *if* the question of sharing were set aside. Sources counting ‘hygienic’ latrines (limited to one or two sharing households and having intact water-seals) find percentages around 50 to 52 per cent, a definite increase from the 33 per cent found in the government’s 2003 baseline survey (BBS & UNICEF 2010; BRAC 2013).

## **Unsanitary Household Latrines and Open Defecation**

These surveys suggest that approximately six to 15 per cent of households are continuing to defecate either in the open or in uncovered places. All indications are that open defecation in scattered outdoor locations has declined greatly from the 42 per cent rate found in 2003, but it continues to occur – at rates of either 3% (JMP), 4-6% (CCD & ICCDDR,B), 8.5% (WaterAid), or 13.5% (BRAC-WASH), according to four different large-scale surveys. Household use of fixed but unsatisfactory defecation places (open pits or hanging latrines) has been found to continue at rates of 2.4% (BRAC-WASH), 8.5% (WaterAid), or 12% (JMP). In brief, Bangladesh has made great strides in changing household defecation habits, but public health challenges still exist.

## **Monitoring Gaps**

Seven of the 23 professionals we met in Dhaka in 2015 expressed concern about the current state of sanitation monitoring. VERC staff member Md. Masud Hassan remarked, ‘We do not see any evaluation or monitoring programmes that can help us take stock of the total sanitation situation and know what improvements are needed’. Two representatives of the PSU, Md. Mohsin and Md. Abdur Rauf, agreed: ‘There is not any solid data. The JMP is based on secondary data. The last government survey was done in 2003. A new survey is needed’. Professor Mujibur Rahman, of ITN-BUET, disputed the JMP’s definitions and opined that there was too much ‘confusion’ about sanitation statistics. The perceived data gap is a sensitive point, because Bangladesh either

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<sup>16</sup> 57 per cent ‘improved’ plus 28 per cent unimproved because shared (see Annex 1).



will or will not be seen as reaching the sanitation target associated with the Millennium Development Goals, depending on how latrine coverage is measured.

## The Sanitation Ladder

When sanitation specialists describe the steps needed to make improvements, the first one mentioned is the move away from open defecation (OD) to some kind of ‘fixed-place’ arrangement. OD was common along village pathways or railroad tracks, in bamboo groves, and under trees with extensive above-ground roots. Many households already had made the move to some kind of ‘fixed-place’ defecation before the 2003 Sanitation Campaign began. A popular arrangement was to put a plastic or other fence around a small patch of ground at the edge of a rural compound, where family members could defecate on the open earth. As a region with many waterways, Bangladesh’s sanitation problems included numerous ‘hanging latrines’ extending over rivers and canals, especially in the southern, coastal belt region. Or elevated ‘hanging latrines’ were constructed out of wood or even bricks and concrete, with faeces dropping into household ponds or onto bare earth.

The next step, now achieved by the majority of the population, is to confine faeces in some kind of pit. For poor people in many of our study areas, the low-cost or free (from the union *parishad*) concrete ring and slab system is still common. If it is the normal union-subsidised three-ring system, it is only 1.5 m. deep. A latrine pit of this type fills up quickly, and there are problems of leakage and breaking, as low-quality concrete often is used.

In CLTS areas and others a variety of locally invented pit latrine types are still found. One such system is a six- to eight-foot deep offset, vented pit lined with a woven bamboo basket, called *duli*. In 2015 this system reportedly is still widespread in that union. According to union council members, more than 40 per cent of their households were using *duli* latrines in 2010. Poor people and others were setting the basketry liners deep down in their latrine pits, then placing concrete rings in the upper portions. Villagers told us that while a single *duli* lined pit would last for three or four years, the combined *duli* plus concrete ring system could be used for eight or nine years. This system has the advantage of being very inexpensive, but it is prone to many problems, especially leakage and being chewed by rats.

Non-poor households – and some poor ones as well – are upgrading their three-ring and slab systems to five or more rings, increasing the depth of the pit. Offset pits are considered relatively easy to clean; and twin-pit systems allow filled-up pits to decompose while a family uses the second pit (Ahmed and Rahman 2010: 202-203). Vent pipes are common in these upgraded types.<sup>17</sup> More affluent families in rural areas may have septic systems and attached bathrooms.

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<sup>17</sup> In our 2010 survey of 50 ODF unions we found 25 per cent of household latrines to have vent pipes in good condition; approximately half had nets on them to prevent entry by insects.

Considering the Bangladesh population's increasingly varied needs and demands, the World Bank is starting a programme to support entrepreneurs who offer diverse latrine types in rural markets. The purpose of this programme is to give consumers a range of choices to suit various physical conditions and social needs.

Flooding during the monsoon season can cause pit latrine contents to overflow. The solution to this problem is to build latrines on raised platforms.<sup>18</sup> Most homes are built on raised plinths to prevent water entry during normal floods. Poorer families, however, often consider building a raised latrine platform to be unaffordable.<sup>19</sup> Latrines in *char* and *haor* areas are especially vulnerable to flood damage, so they should be built on elevated platforms.

In a 2015 visit to a relatively remote union in Barisal District, Banaripara Subdistrict, we found that consumers have begun to demand improved quality concrete (made with a special type of sand and more cement than usual) for the manufacture of latrine rings and slabs, so that their facilities will not easily crack or break. Latrine sellers are responding to this demand.

As their experience with latrines goes on, many families improve the housing for their facilities as well as the rings and slabs. Crude (*kacca*) walls of leaves, jute bags, or plastic sheets may be the first enclosures erected. The next step is a tin shed. The most desirable housing is a brick wall (known as a *pucca* structure). Roofs provide protection from storm damage; so adding a roof is an important step.<sup>20</sup>

Doing a 2015 transect tour through the remote union of Banaripara Subdistrict by boat, we observed 20 household latrines in two villages. Nine had been installed between 2004 and 2009, and 11, since 2009. All were said to have been repaired or upgraded since being installed. Repairs or upgrades included pit cleaning (8), repairing pans or water-seals (9), stopping the seepage of pit contents (20), repairing of latrine housing/superstructures (11), and pouring of increased amounts of water to stop bad smells (20).<sup>21</sup> Two public latrines in market areas had been cleaned out and repaired, but they had not been otherwise upgraded since being installed.

Maintaining or upgrading a household latrine requires not only money and technical support; it also requires motivation and knowledge of options. Md. Monirul Alam of UNICEF, says, 'About moving up the sanitation ladder, it depends on the existence of a certain mind-set. Is a latrine a basic need, or is it a luxury?' 'Even solvent people will not replace their latrines if they are not sufficiently motivated', according to Hasin Jahan of WaterAid. PSU staff said, 'From 2003 we've found that people will change their defecation habits if they are motivated. Now they need encouragement to use their pit latrines in a more hygienic way'. Professor Mujibur Rahman, of

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<sup>18</sup> Information from Sayedur Rahman, of UST.

<sup>19</sup> In our 2010 survey of household latrines of 50 unions we found 30 per cent to be elevated above the level of the homestead yard.

<sup>20</sup> In our 2010 survey of household latrines in 50 unions, we found 52 per cent of the enclosures to have roofs.

<sup>21</sup> Some latrines had been worked on in more than one way (Tofazzel Hossain Monju field notes).

ITN-BUET, comments that ‘There is a knowledge gap. It’s time to bring knowledge to users now. We’ve brought them out of OD, but they need sustainable options’.

Union chairmen interviewed in 2015 all commented on the need to improve standards of household latrine maintenance and cleanliness. Breakage is a general problem, and poor households cannot always afford to make repairs or replace broken rings and slabs. Others may not be sufficiently motivated to do so. Monsoon rains or flooding can seriously damage latrines, especially those without roofs. In one union formerly covered by a CLTS programme the chairman told us that the poorest people still are using simple pit latrines without concrete rings and covering the squat-holes with plastic sheets.

### Household Latrines: Some Technical Innovations

The widespread pour-flush, water-sealed latrine requires one or two litres of water to flush properly. To save themselves the trouble of arranging a sufficient supply of water near the latrine, many owners break the water-seal.<sup>22</sup> A newly invented, low cost, plastic slab model (SaTo-pan, from American Standard Co.) is rapidly gaining popularity, because faeces can slip into the pit without any need to flush with much water. A weighted flap closes as soon as faeces drop down (see Figure 1).<sup>23</sup> The plastic pan has the added advantage of being light weight and thus easily portable. According to Sayedur Rahman, of UST, some union chairmen in river islands (*chars*) are distributing these items to their community members.



**Figure 1:** American Standard SaTo Sanitary Toilet Pan. Source: Author’s own.

Leaching out of latrine pit contents is a common problem in high water table areas. One solution to this problem, mentioned by a WASHplus staff member, Md. Faruque Hussain, is to create a ‘sand envelope’ around the sides and the bottom of the pit, to filter the liquid and reduce risk of bacterial contamination of ground water. WASHplus is currently testing the efficacy of this technology in a small study with ICDDR,B.<sup>24</sup>

In the remote union of Banaripara Subdistrict we found that a buffer wall had been erected to prevent water pollution by blocking the flow of any leaked pit contents from a row of privately owned latrines set alongside a village canal. A local leader - formerly a DPHE-Danida sanitation committee member and now an elected union council ward representative - explains:

<sup>22</sup> In our 2010 survey we found 45.2 per cent of all latrines with slabs to have no water-seal, a broken water-seal, or no other flap or cover sealing the hole in the slab (Hanchett *et al.* 2011: 15).

<sup>23</sup> ‘Recognized with 2014 R&D 100 Award’, 24 November 2014, article posted online: <http://contractormag.com/kitchen-bath-industry-show/american-standard-sato-sanitary-toilet-pan-recognized-2014-rd-100-award>

<sup>24</sup> International Centre for Diarrhoeal Disease Research, Bangladesh.

I try to spread good ideas among the neighbourhoods (*para*) in my ward. For example, we still set latrines alongside the canal and the road. But these are very different from the old types of hanging latrines or crude (*kacca*) structures. These are ring-slab latrines. Sometimes it is difficult to stop leakage. I found one latrine owner had created a buffer wall, so that if there was leakage it would be stopped. I advised others to create these walls, and now everyone in my ward does it.<sup>25</sup>

At least two organisations are known to be working on ‘eco-san’ latrine designs, UNICEF and Bangladesh Rural Academy for Development (BARD, in Comilla). UNICEF is promoting 11 different models, ranging in price from Tk. 5000 to 20,000. These latrines separate urine from faeces and thus accelerate the drying-up of faecal matter, according to Md. Monirul Islam of UNICEF.

Faecal matter also dries up in the twin-pit latrine system. Disposal and use of this composted material are still subjects of experiment and debate. Several experts we met in Dhaka said that some people are willing to use the material to fertilise crops. Concerns about the perceived spiritually and physically ‘polluting’ nature of human faeces, however, remains an obstacle to full acceptance of using human waste to fertilise food crops in South Asian countries.



**Figure 2:** *A tree grove used for open defecation in 2010 (L) had a household latrine built in it by 2015 (R). Location: Banaripara Subdistrict, Barisal District (Source: Anwar Islam, used with kind permission).*

An interesting innovation we found in Banaripara Subdistrict was the placement of latrines in formerly preferred open defecation locations. In the remote southern union, moving along canals that were formerly lined with hanging latrines, we saw that all had been replaced with ring-

slab sets. In a larger, more centrally located union of the same subdistrict we re-visited three or four bamboo groves or other ‘jungle’ areas used in 2010 for OD and found five years later that families had built latrines in those places<sup>26</sup> (see Figure 2).

## Comments of Local Leaders

In our field visits of 2009, 2010, and 2015 we have found people increasingly concerned about bad smells emanating from neighbours’ latrines. Social pressure appears to be a major factor motivating people to maintain their latrines. One Banaripara Subdistrict chairman’s comment in 2015 was, ‘Social pressure is invisible. It is an internal feeling, a wish to have a latrine that is as good as or better than the neighbour’s latrine’. Another local leader said, ‘If anything bad

<sup>25</sup> Tofazzel Hossain Monju notes, February 2015, Banaripara Subdistrict.

<sup>26</sup> Anwar Islam notes, February 2015.

happens – some open defecation, a hanging latrine set up, or bad smell, I react. I take quick action’. His union chairman made a similar comment: ‘When I hear about any bad latrine or bad smell, I advise the concerned council member to take action’.<sup>27</sup>

The Banaripara union chairman told us that, ‘The past three or four years have been crucial for making our union actually free of open defecation (ODF). I said actual ODF, because there were many gaps after our union was officially declared ‘100 per cent’ free of OD. There still was open defecation, and there were some crude (*kacca*) latrines. But now you cannot find any faeces, not even on isolated paths. There are no crude latrines along the canal. Dirty water does not leak out’.<sup>28</sup>

Other union chairmen interviewed in 2015 all said that much more sanitation work remains to be done. Some comments from CLTS unions were these: ‘The work is not completed. A large section of the poor need latrines’. (Naogaon District) ‘People are more aware now about sanitary latrine use, but problems are not fully solved. The number of families has increased because of household division. There are not enough latrines’. (Lalmonirhat District) ‘Many latrines are broken and unusable. Our 100% ODF situation has changed. Poor people cannot afford good quality latrines. They are using broken ones. But there are no more crude latrines (*kacca*), because people are conscious about sanitation, and there isn’t much space anymore for open defecation’. (Chittagong District) ‘The problems are not all solved. There still are pockets of open defecation: forest areas are used by migrant labourers. Some villages have congested settlements with shared latrines, and some crude (*kacca*) latrines spread bad smells’ (Gazipur District).

## **Unfinished Business in Bangladesh Sanitation: Current Views**

Discussing the current state of Bangladesh sanitation with representatives of 14 organisations in early 2015, we found most agreeing that the problem of open defecation is more or less solved, but that important problems still require urgent attention. Rokeya Ahmed, of the World Bank’s Water and Sanitation Program said, ‘CLTS was good for ODF. ODF is done now. Now something more is needed’. The people we met emphasised six current sanitation priorities in Bangladesh: quality of existing latrines, hard-to-reach areas, faecal sludge management, urban squatter settlements, sanitation marketing, and hygiene.

### *Quality and Sustainability of Existing Latrines*

Seven of the Dhaka professionals we met expressed concern about the poor quality of many household latrines now in use. This problem is especially relevant to poor families, who may not have the means to improve or replace rings and slabs when they break, or to clean out pits when they fill up. PSU representatives said, ‘Toilets are not satisfactory. People want better facilities,

<sup>27</sup> Tofazzel Hossain Monju notes, February 2015.

<sup>28</sup> Tofazzel Hossain Monju notes, February 2015, Banaripara Subdistrict, Barisal District.

but they cannot afford the equipment they want. Questions of quality remain'. Md. Monirul Islam, of UNICEF, said, 'The three-ring latrines fill up too fast'. Professor Mujibur Rahman, of ITN-BUET, mentioned that there are special latrine 'sustainability' problems in areas affected by deep flooding, erosion, or flash floods. 'They suffer losses almost every year. Latrines are damaged'.

Even in areas with less extreme problems, poor people starting out with inferior equipment have difficulty climbing up the 'sanitation ladder'. One very poor man we met in Barisal District, who had a latrine that smelled bad, leaked, and had faeces on the pan, explained his dilemma:

Our government issued an order to stop open defecation, so we stopped. The union council pressured me. I had no money at that time. I took a loan from relatives to pay for the structure (housing), and the union provided me with a three-ring and slab set during that ODF period. I still have the same latrine, but now it is broken. Poverty makes it very difficult for me to maintain the hygiene code. It would be better to install a new latrine than to have this pit cleaned out. Sweepers charge too much money, and we don't have any land where sludge could be dumped. Neighbours do not allow us poor people to dump faecal sludge on their land.<sup>29</sup>

### *Hard-to-Reach Areas*

There still are some regions of Bangladesh where sanitation programmes have had only minimal effects to date. These include sandbar islands (*chars*), areas called *haors*, which are deeply flooded for six months of every year, parts of the Chittagong Hill Tracts, and other areas, depending on a combination of social and physical factors, plus vulnerability to extreme weather events. Two recent reports (GoB 2012 and Ahmed and Hassan 2012) identify those places that are considered either 'extremely', 'very', or 'moderately' hard-to-reach, according to certain criteria, including low per centages of latrine coverage (see Figure 3). A 2013 baseline survey by the HYSAWA Fund found hygienic latrines (including shared) in only 13.9 per cent of Chittagong Hill Tract houses in areas defined as hard-to-reach.<sup>30</sup>

The Policy Support Unit (PSU) has formed a Hard-to-Reach thematic group, to disseminate information about these areas and encourage organisations to work in them.<sup>31</sup>

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<sup>29</sup> Anwar Islam notes, February 2015 interview, Saliabakpur Union, Banaripara Subdistrict, Barisal District.

<sup>30</sup> This survey covered 12,960 households in 48 unions of Rangamati, Khagrachari, and Bandarban districts.

<sup>31</sup> Information from Hasin Jahan, of WaterAid Bangladesh.

**RULE 1:****IF** safe water coverage is very bad**AND IF** sanitation coverage is also very bad**AND IF** groundwater level is very low**AND IF** it is in hotspots areas**AND IF** poverty status is very high**AND IF** child mortality is very high**THEN**The area will be demarcated as an ***Extremely Hard-to-Reach Area***.

**Figure 3:** As adapted from *Criteria Defining Extremely Hard-to-Reach Areas* (from Ahmed and Hassan 2012).

### *Faecal Sludge Management*

Reflecting a broad consensus among sanitation professionals, Md. Wali Ullah, Director of the Sanitation Secretariat, told us, 'Faecal sludge management is a burning issue'. Hasin Jahan, of WaterAid Bangladesh, said, 'The whole sector should now plan for the second generation sanitation problem – faecal sludge management. We installed thousands of pit latrines without asking about either faecal sludge or environmental pollution. Our mind-set wasn't aligned to the truths. We never appreciated how important these things were'. She continued, 'We need to search the whole stool chain, from collection to re-use. Making this happen will require collaboration among groups with very different interests. About re-use, for example, who are the stakeholders? Have we talked with agriculture? No'.

Faecal sludge management is an urgent matter in both rural and urban areas. Sewage systems in all municipalities are known to be inadequate or nonexistent. Many question whether the septic systems supposedly serving Dhaka apartment buildings are functioning properly. Dipok Chandra Roy, of Practical Action, told us, 'Nowadays the main issue of concern is not per centages using latrines, because people have knowledge and access to household sanitation facilities. The problem now is the lack of sewer systems and sludge management. People are using improved latrines, but sludge from those latrines is polluting the environment, rivers, and canals'.<sup>32</sup>

Cleaning out the filled-up pit is a constant problem. If they have space, families may just cover a filled-up pit and shift their latrine housing to a different location.<sup>33</sup> Others bargain with pit cleaners, who are available in increasing numbers nowadays, to get their pits cleaned at a cost of Tk. 100-200 per ring, depending on width of the pit. 'Pit cleaning is too expensive for poor people', says Dipok Chandra Roy, of Practical Action. Some unknown number of poor families in all places secretly clean the pits themselves at night, to avoid embarrassment and the social

<sup>32</sup> Shireen Akhter notes, February 2015.

<sup>33</sup> They may or may not upgrade their latrine model when they shift. Poor people tend to replace it with the same type.

stigma associated with such a ‘polluting’ activity. Union chairmen we interviewed in 2015 mentioned that poor families sometimes clean out their own pits.

In rural areas pit cleaning usually is done with buckets, spades, and ropes, although there have been experiments with mechanical pumps here and there. Waste is either buried in new holes, diverted through pipes to new holes, or dumped in canals or fields. There are no statistical data on rural sludge disposal practices.

Professor Mujibur Rahman, of ITN-BUET, commented on urban problems. ‘The picture behind the success is really challenging’ in terms of environmental issues. ‘I have been trying to tell the government people, if 5000 litres of faecal sludge is being dumped openly [in municipal areas], then 5000 people are doing open defecation’, he said. He praised the country’s achievements in sanitation, because so many people are now ‘thinking of latrines’. Compared to 2003, there have been huge improvements. Slum area sanitation and other urban systems, however, have been generally neglected. Latrine sharing is urgently needed in slums, regardless of JMP’s insistence that only private latrines can be considered ‘improved’. When there are space constraints, rural or urban, latrine sharing is necessary. He said, ‘You must clearly spell out the context’, rather than holding all to a single standard.

Faecal Sludge Management conferences, three of which (FSM-I,-II,-III) have been funded thus far by the Gates Foundation, are influencing opinion among Bangladesh sanitation professionals. A manual on sludge management, now being written by Professor Mujibur Rahman, is expected to provide a framework for future action.

### *Urban Squatter Settlements*

Known as *bastis*, large squatter settlements can be found in almost all Bangladesh cities and towns. Four of the professionals we met in 2015 agreed that, ‘Sanitation for the urban poor is the biggest challenge because of poor drainage and maintenance issues’, as Md. Masud Hassan of VERC, put it. Latrines in *bastis* generally are shared by multiple households, because of space constraints; and they often are managed by hired caretakers. According to Sayedur Rahman, of UST, female caretakers are needed in these situations, to ensure the safety of female users.

Several municipalities are working on sanitation in *bastis*, some with the help of large NGOs, such as DSK, Practical Action, or the NGO Forum for Drinking Water Supply and Sanitation. Dhaka’s water and sanitation authority (DWASA) has formed a new Low Income Communities department. Nonetheless, the professionals we met agree that this problem is extremely serious -- and that latrine sharing arrangements are essential to solving it.<sup>34</sup>

### *Sanitation Marketing*

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<sup>34</sup> Christine Sijbesma’s study, *Financing Models for the Urban Poor* (2011) systematically reviews the global experience with seeking economic solutions to these types of problems.



The World Bank's Water and Sanitation Program (WSP), together with some partner organisations, is starting up a programme to support small-scale entrepreneurs wishing to develop and market new latrines and other products.<sup>35</sup> This programme is urgently needed, according to the WSP's Rokeya Ahmed, because 'Slabs in the market are of poor quality and often break after a few years of use. A number of people have fallen into their latrine pit. All of the plastic pans currently available in the market lack design elements that allow 'gripping' to the cement, so the plastic pans separate from the slabs'. Offset single- and twin-pit, pour-flush latrines presently are considered the best options. 'WSP also has introduced four different types of toilet platforms in the rural market, three different types of hand washing devices and multiple designs of toilet housing, considering the financial ability of poor households', according to Rokeya Ahmed.

Capacity development and financial support for entrepreneurs are parts of this program. 'Small scale sanitation entrepreneurs receive three days of training on how to produce and market newly developed options, with practical demonstrations', according to Rokeya Ahmed. Zillur Rahman told us that, 'Plan Bangladesh has been promoting sanitation marketing, training some 155 private entrepreneurs in areas where the CLTS programme formerly eliminated open defecation'.

Latrine manufacturers and sellers need credit, in order to offer installment payment plans to their customers. The World Bank is seeking to form linkages between latrine suppliers and sources of low-interest microcredit, in order to protect suppliers' financial stability. The microcredit organisation, ASA, provided loans to 300 entrepreneurs within the six months prior to February 2015, according to Rokeya Ahmed; and ASA was working to introduce sanitation loans in 24 districts.

During our team's 2015 visits to two Barisal District unions, we found gaps in the availability of latrine sellers. In the more remote areas trade in latrine parts was moving at a slow pace; but in less remote areas increasing numbers of families, especially the more solvent, reportedly were buying concrete rings and slabs.

### *Hygiene*

Training on handwashing with soap, domestic water management, hygienic food preparation and storage, and solid waste disposal are standard parts of all organisations' sanitation programmes, with each organisation devising its own approach.<sup>36</sup> All are striving to improve their hygiene education techniques by introducing methods such as hands-on demonstrations and training of local volunteers.

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<sup>35</sup> At the time of our February 2015 meeting the piloting phase of this programme had been completed.

<sup>36</sup> In our 2010 survey of household latrines in 50 ODF unions, we found 84 per cent to have handwashing stations. Water was available at 74 per cent of them, and soap was observed at 30 per cent (World Bank WSP database, used for Hanchett *et al.* 2011).

Placement of latrines far from drinking water sources is one hygiene issue getting increased attention nowadays. And the problem of keeping household latrines clean continues to be a challenge in many places, including those with high percentages of ‘improved’ or ‘hygienic’ types.<sup>37</sup>

We found a newly added emphasis on menstrual hygiene in our 2015 Dhaka conversations. As most sanitation specialists now recognise, problems associated with menstrual hygiene can obstruct, or even stop, adolescent girls’ educational progress, unless their schools’ facilities are set up to help meet this need. Emerging from the shadows, this issue is receiving increasing attention in Bangladesh sanitation programmes in recent years. According to Milan Kanti Barua, BRAC-WASH organises subdistrict conferences for adolescent girls, in order to ‘give them a chance to speak up about menstruation and menstrual hygiene’. Policy Support Unit staff members mentioned recently conducting 18 district-level dissemination workshops on personal hygiene, food hygiene, and menstrual hygiene.<sup>38</sup>

## **Sanitation Facilities for Poor Households and the Ultra-poor: Subsidy Issues**

The Bangladesh sanitation sector has tried out a full range of approaches to subsidising sanitation facilities: from the zero-subsidy system of CLTS and earlier programmes, through partial subsidies, on to union chairmen simply giving rings and slab sets to households. Experiments with subsidies continue to evolve, as many organisations strive to expand or improve latrine coverage, especially among poor households.

There is a broad consensus among the sanitation professionals and others we met in 2015 that subsidies can do harm as well as good. As many observers of CLTS programmes have noted, *not* subsidising latrine installation forces people to think about the whole-village health and environmental advantages latrines offer. Not subsidising latrine installation can thus motivate people to invest their own time, energy, and money in equipment which they probably will feel responsible to use and maintain. ‘About subsidies, it is important to ask, “Subsidy for whom?” People who own motorcycles or cell phones do not need subsidies. Give subsidies only after achieving 70-80 per cent latrine coverage. Free latrines otherwise will not be used’, advises Md. Masud Hassan, of VERC.

Subsidies may cause delays in getting latrines, because they force people to wait and encourage passive attitudes, even fostering non-use. Professor Mujibur Rahman, of ITN-BUET, opined, ‘I’m not against people *having* good latrines. I’m against people *waiting for* good latrines’. One middle-class man we met in Barisal District in 2015 said he had been promised a free ring-slab set by an NGO after the devastating SIDR cyclone of 2007. He waited three or four years but never received one. ‘If they had not misled me’, he said, ‘I would have bought a latrine myself. I carried the shame for a long time because my household had no latrine. This hurt me a lot. Now I

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<sup>37</sup> In our 2010 survey of household latrines in 50 unions, we found 44.3 per cent of all improved/shared latrines to be clean, meaning no faeces visible on the floor, pan, or water-seal, and the pit not leaking profusely (Hanchett *et al.* 2011).

<sup>38</sup> Md. Mohsin and Md. Abdur Rauf.

have a three-ring and slab set, a whole latrine that I set up in 2014 without help from anyone. I am proud of that'.<sup>39</sup> A well-meaning union chairman interviewed in 2015 had a similar experience. After spending 100,000 taka (US\$1300) to distribute many free latrines to poor villagers, he found that, 'Most of the latrines we constructed remained unused. People preferred to buy their own, better quality and larger ones'.<sup>40</sup> A staff member of UST, Sayedur Rahman, has observed during his organisation's work in river islands that, 'The units we provided to them are breaking down, but the ones they built themselves, they are gradually improving. If they build from their own need, they pay attention to quality'.

There is no doubt, however, that most extremely poor households cannot own, maintain, or upgrade latrines without outside financial support. This is a point of general agreement among almost all those we interviewed in 2015. 'For the ultra-poor, government services and support are absolutely needed', according to BRAC-TUP staff member, Rozina Hoque. One chairman of a union that became ODF under the government-only approach told us in 2015 that his union supports poor households by paying their pit cleaning expenses.

It is especially interesting that union chairmen and NGOs in the five CLTS unions we recently contacted are now subsidising latrine installations or distributing free ring-slab sets to poor households. CLTS approaches established a general sense of local pride in being ODF, but some types of subsidy are felt to be necessary to maintain the situation.

The programmatic challenges are (a) identifying those who truly require subsidies and (b) arranging financial assistance in ways that encourage a sense of self-help and homeowner responsibility. There are various definitions of 'poor' households in use at this time. The government uses household land ownership (less than 0.5 acres) as one criterion; another is per capita calorie consumption. Some of the larger NGOs do wealth-ranking exercises that include multiple factors, often sharing this information with union council chairmen, to make sure that latrines are distributed to those who actually need the help.

BRAC's Targeting Ultra-Poor (TUP) programme fully supports sanitation for 'ultra-poor' households as part of its 'sustainable livelihoods' strategy. TUP either gives them latrines or arranges for free latrines from other sources as an essential health maintenance measure. Unlike other programmes, which work with whole communities or membership groups, BRAC-TUP supports specific households, linking them with any available resources and training opportunities from multiple governmental or non-governmental agencies. They start with social mapping, participatory rural appraisal, surveys, and wealth-ranking exercises. Programme participants are vetted to make sure that they are not already involved with other programmes. 'We get certificates of no-objection from other groups working in an area', explained Rozina Hoque. Participants, like other very poor Bangladeshis, are not initially involved with micro-credit groups. Only after their livelihood situations improve do they 'graduate' to a point where

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<sup>39</sup> Anwar Islam notes, Banaripara Subdistrict, Barisal District.

<sup>40</sup> This union had been declared ODF under the government-only approach. The chairman at the time was enthusiastic about promoting hygienic latrine use, as is his successor.

they may benefit from micro-credit. Eligibility to ‘graduate’ out of the ultra-poor status is carefully computed according to multiple criteria.<sup>41</sup>

An important point to keep in mind when addressing the needs of the poorest households is their heterogeneity. Female household heads, disabled people, and marginalised ethnic or occupational groups must overcome multiple social and economic obstacles to livelihood improvement.<sup>42</sup>

Flexible financing is helpful to poor households wanting new or upgraded latrines. Plan International has started offering financial support of a new type. ‘We designed a new model of offset-pit latrine with five rings’, explained Md. Zillur Rahman in a recent conversation. ‘The total cost is Tk. 3000-4500 (US\$45-52). We give hard-core poor Tk. 2300 toward the cost. They pay the rest in installments. They can afford this. Some people are adding more rings’. This financing programme is intended to help hard-core poor households in areas where the organisation’s CLTS activities had succeeded in eliminating open defecation. According to Md. Nurul Osman, Programme Director of the HYSAWA Fund, a good quality latrine can cost as much as Tk. 10,000 (approximately US\$130).<sup>43</sup> Professor Mujibur Rahman’s 2009 overview stresses the importance of credit: ‘It is extremely important here that funds are made available in the form of credit facilities for people to buy improved sanitation facilities’ (Rahman 2009: 26).

Agencies should ‘require people to make co-payments for their latrines’, according to Rokeya Ahmed, who once worked actively on the CLTS approach and now is with the World Bank’s Water and Sanitation Program. (A household contribution can be in the form of labour, of course). Water Aid staff member, Hasin Jahan, says about the poor, ‘It should be safety net rather than subsidy’. But, she continues, ‘Sanitation must be available year-round, to all, and in all places’, requiring flexible approaches.

Several of the professionals we met told us that rural poverty in Bangladesh is declining. One reason for this trend is that the garments industry is attracting large numbers of unskilled labourers, so daily pay for agricultural labourers is increasing. Remittances from family members working abroad also contribute to the income of poor households. Some undetermined number use their larger incomes to upgrade their latrines. Poverty, however, has not disappeared; so the issue will continue to be relevant in future years.

## **Learning Points from the Bangladesh Sanitation Experience**

One learning point from the generally successful Sanitation Campaign of 2003-2006 is the importance of combining governmental and community mobilisation strategies. ‘For a sanitation

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<sup>41</sup> No self-reported food deficit for one year, multiple sources of income, homes with solid roofs, ownership of livestock or poultry, kitchen gardens, cash savings, no child marriage, school-age children going to school, couples using family planning, and use of a sanitary latrine and clean drinking water (BRAC n.d.).

<sup>42</sup> BRAC-TUP discussion.

<sup>43</sup> Average rural monthly income is Tk. 6096, according to the 2010 Household Income and Expenditure Survey (BBS 2011).

campaign to succeed, it has to come from the head of government. Our sanitation started from the top. We did it both ways: top-down and bottom-up', says Md. Monirul Alam, of UNICEF. Community people need to understand the health benefits of hygienic latrine use. Processes such as CLTS definitely help to change all-important social norms.

The union is the most appropriate administrative level for capacity-building in Bangladesh, according to many of those we interviewed. 'Union councils have statutory responsibility. Our learning point was: it works. Many thought that the union would misappropriate funds or not supervise their WASH Facilitators properly. But they are working nicely in 81 unions now', says Md. Zillur Rahman, of Plan International Bangladesh. 'Open defecation is now down to three per cent. The credit for this mainly goes to the union *parishads*', according to Md. Nurul Osman, of the HYSAWA Fund. The union council represents a larger and more diverse population than India's village *panchayat*. Being rather large has the advantage of making visible changes in environmental practice.

NGOs are a prominent part of the Bangladesh sanitation scene. Some are huge and working on large-scale sanitation issues. They cannot replace governmental institutions, however. It is only government that has the full-scale authority and responsibility -- and some steady revenue stream, however limited -- to protect public health by sustaining 100 per cent latrine usage. Most of the union chairmen we interviewed appreciated the help their unions had received from NGOs in becoming ODF and solving follow-up problems, but two mentioned that NGOs may withdraw at any time. Governmental officers or departments, weak or strong, do not have that option.

While it is not as geographically or culturally diverse as India, Bangladesh does have plenty of diversity. 'When installing latrines, we must consider geographical conditions, disaster risk, and water availability', according to Rozina Hoque, of BRAC-TUP. 'Tailor the approach to different geographical and cultural situations', says Rokeya Ahmed, of the World Bank Water and Sanitation Program. The learning point here is that different areas require different approaches, both technical and social. This is another argument in favour of community mobilisation strategies.

Subsidies of some sort are part of the Bangladesh picture, even in unions that became ODF under the strictly no-subsidy CLTS approach. In the long run the poorest households cannot maintain their concrete latrines, much less move up the sanitation ladder, without some kind of outside help. The challenge of the policy-maker is to strike the right balance between helping the poor and establishing the principle of homeowner responsibility. The Bangladesh experience, like that of many other countries, has shown that simply *giving* latrines to people will not change their defecation habits unless they are motivated (personally and group-wise) to use latrines.

It is becoming increasingly clear that some residential arrangements demand multi-household latrine sharing. Though problematic for cleaning and other reasons, latrines shared by joint family members are normal in this part of the world. Even in rural areas there can be settlements almost as congested as urban squatter settlements, where some kind of community latrine

arrangement always is needed. Rather than rejecting these as ‘unimproved’, the international community should study ways to make them work for the people who need them.

An important gap in the Bangladesh situation is the lack of routine monitoring of sanitation coverage or quality. The government seems too complacent in accepting the Joint Monitoring Program’s 2014 report of ‘three per cent ODF’. Three per cent is a positive finding, but it is not helpful to focus on this news instead of arranging to monitor the country’s sanitation status more properly.

The most important learning point ten years after the Sanitation Campaign is that: sanitation improvement is a continual process. It is never finished. New households are formed, and new houses are built. Floods and cyclones come. Concrete breaks. Rats eat bamboo pit liners. Pits fill up. Migrant labourers come in large numbers to help with the harvest. There always will be new problems to solve, new leaders to educate. The Bangladesh experience has shown that declaring thousands of villages as ODF is just the beginning.

## **Conclusions**

Our 2015 discussions with people at all levels of Bangladesh society reveal both pride in sanitation achievements and concern about meeting future challenges. A combination of approaches – subsidies, non-subsidies, micro-credit, sanitation market improvements, programming at various scales, motivating of individuals and groups – has resulted in a majority of households’ using latrines rather than defecating openly. Policy documents have created frameworks to guide activities in diverse areas. Issues such as quality, faecal sludge removal, and appropriate subsidies for very poor households remain, however. Hard-to-reach geographical areas lag behind the rest of the country. As Professor Mujibur Rahman’s 2009 overview pointed out, failing to address these challenges will threaten the sustainability of achievements.

Unique characteristics of the Bangladesh sanitation situation include the focus on its local government institution (the union), its long history of NGO-sponsored community mobilisation, and its high population density. Donor involvement has been a regular feature of the sanitation scene for more than three decades. It is a relatively small country, the size of only one of India’s states. All of these special conditions and characteristics have supported its achievements to date.

The transitions and challenges occurring in 2015 are daunting, to be sure; but the country has faced larger ones in the past. Moving away from open defecation was the biggest one. This achievement was primarily psychological, cultural, and political. Introducing and maintaining sewer systems, however, will involve substantial expense. Upgrading household latrines in rural areas also costs money. Donors’ interests will shift away from sanitation to urgent matters such as climate change; so new revenue sources will be needed.

There is by now a well-established network of professionals working on the critical issues of the day; and the general population is committed to maintaining public health through latrine use. It

seems likely that the next challenges will be met, considering the Bangladesh sanitation sector's intellectual and organisational strengths.

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## Annex 1

| Information Source                     | Survey Year | Survey Area   | Household Latrines/OD | Latrine Category/OD   |
|--|-------------|---|-----------------------|---|
| BBS & UNICEF (2010)                    | 2009        | National sample survey (Rural/urban)  | 54.1%                 | Improved (JMP definition)   |
|  |             |   | 51.6%                 | Hygienic (GoB definition)   |
| BBS, UNICEF (2014)                     | 2012-2013   | National sample survey (Rural/urban)  | 55.9%                 | Improved (JMP definition)   |
| JMP (2014)                             | 2014        | National sample survey  | 57%                   | Improved  |
|  |             |   | 28%                   | Unimproved because shared   |
|  |             |   | 15%                   | Other unimproved (12%) & Open defecation (3%)                             |
| CCD & ICDDR,B (2014)                   | 2012        | UNICEF SHEWA-B: 19 districts, 76 subdistricts*  | 31%                   | Improved (JMP definition)   |
|  | 2012        | 15 subdistricts covered by SHEWA-B mass media campaign*   | 36-41%                | Improved (JMP definition)   |
|  |             |   | 4-6%                  | Open defecation   |
| WaterAid Bangladesh (2015 provisional) | 2014        | Sample survey of project-installed tube wells in 16-district working area under the ASEH project: two user HH interviews per tube well* | 86.9%                 | Improved or Hygienic types, but including all shared (61% are shared)     |
|  |             |   | 12.9%                 | Uncovered pit or 'hang' latrine (4.4%) & open defecation (8.5%)           |
| HYSAWA (2013)                          | 2013        | Baseline study: 340 unions in hard-to-reach areas of 10 districts   | 29.9%                 | Hygienic+shared   |
| BRAC (2013)                            | 2011        | Sample survey of 50 subdistricts out of the 152-subdistrict BRAC-WASH-I working area  | 57.4%                 | Sanitary latrines (GoB 'hygienic' but shared by any number of households) |
|  |             |   | 26.7%                 | Ring-slab latrines without water-seals                                    |
|  |             |   | 15.9%                 | Uncovered pit (2.4%) & Open defecation (13.5%)                            |
|  |             |   | 67.2%                 | Improved (JMP definition)   |
|  |             |   | 49.8%                 | Hygienic (GoB definition)   |

| Information Source         | Survey Year | Survey Area  | Household Latrines/OD | Latrine Category/OD                     |
|----------------------------|-------------|--|-----------------------|---|
| Akter <i>et al.</i> (2015) | 2014        | Sample survey by BRAC Research and Evaluation Division |                       |   |
|                            |             | BRAC intervention areas (WASH-I,-II,-III)              | 74.7                  | Sanitary latrine: Hygienic (GoB)+shared |
|                            |             |  | 19.7                  | Ring&Slab Latrine without water-seal    |
|                            |             |  | 5.6                   | Uncovered pit & Open defecation         |
|                            |             | Comparison areas                                       | 44.1                  | Sanitary latrine: Hygienic (GoB)+shared |
|                            |             |  | 40.9                  | Ring&Slab Latrine without water-seal    |
|                            |             |  | 15.0                  | Uncovered pit & Open defecation         |

\*Final evaluation studies of completed projects